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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,322	12/08/2003	Katsutoshi Katoh	JP920030024US1	2451
26675	7590	06/30/2005	EXAMINER	
DRIGGS, LUCAS, BRUBAKER & HOGG CO. L.P.A.			CHEN, SHIH CHAO	
38500 CHARDON ROAD			ART UNIT	
DEPT. IRA			PAPER NUMBER	
WILLOUGBY HILLS, OH 44094			2821	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/730,322

**Applicant(s)**

KATOH ET AL.

**Examiner**

Shih-Chao Chen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 and 9-12 is/are rejected.  
7) ☒ Claim(s) 7 and 8 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Objections***

1. Claim 11 is objected to because of the following informalities: in lines 9-10, "each antenna ground part is closer to said first or second radio wave resonance part than other ground parts of the wireless communication apparatus" should be changed to --each antenna ground part is closer to said first or second radio wave resonance part than other non-antenna ground parts of the wireless communication apparatus--.

Appropriate correction is required.

2. Claim 11 is objected to because of the following informalities: in line 11, "wherein each of said first or second radio wave resonance part than other ground parts " should be changed to --each of said first or second radio wave resonance part than other non-antenna ground parts--. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-6 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Usui et al. (U.S. Patent No. 6,646,607).

Regarding claim 1, Usui et al. teaches in figures 1-3 and 8-9 an antenna unit (10)

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provided in a wireless communication apparatus (80) which performs wireless communication, the antenna unit comprising: a radio wave resonance part (18) through which a radio wave is transmitted or received; an antenna ground part (16) electrically connected to the radio wave resonance part; and a connection part (17) which fixes the antenna ground part at such a position that the antenna ground part is closer to the radio wave resonance part than other non-antenna ground parts (86, 81) of the wireless communication apparatus.

Regarding claim 2, Usui et al. teaches in figures 1-3 and 8-9 the antenna unit according to Claim 1, wherein the antenna ground part (16) is formed integrally with the radio wave resonance part (18).

Regarding claim 3, Usui et al. teaches in figures 1-3 and 8-9 the antenna unit according to Claim 1, further comprising a feeder (33) laid to the radio wave resonance part (18) at a distance from the antenna ground part (16) and having a shielding conductor (36) connected to the antenna ground part.

Regarding claim 4, Usui et al. teaches in figures 1-3 and 8-9 the antenna unit according to Claim 3, wherein the shielding conductor (36) of the feeder (33) is connected to the antenna ground part (16) on the opposite side of the antenna ground part from the radio wave resonance part (18).

Regarding claim 5, Usui et al. teaches in figures 1-3 and 8-9 the antenna unit according to Claim 1, wherein the wireless communication apparatus (80) has a display panel (86), and the antenna ground part (16) extends outward from a the surface of the display panel away from the display panel (See Figure 8).

Regarding claim 6, Usui et al. teaches in figures 1-3 and 8-9 the antenna unit according to Claim 5, wherein the antenna ground part (16) is positioned adjacent to a region on the display direction side of the display surface of the display panel (86) and on the display panel side of the radio wave resonance part (18).

Regarding claim 9, Usui et al. teaches in figures 1-3 and 8-9 an antenna unit 110) provided in a wireless communication apparatus (80) which performs wireless communication, the antenna unit (10) comprising: a radio wave resonance part (18) through which a radio wave is transmitted or received; an antenna ground part (16) connected to ground; a connection part (17) which fixes the antenna ground part at such a position that the antenna ground part is closer to the radio wave resonance part than other non-antenna ground pads (86, 81) of the wireless communication apparatus; and a feeder (33) laid to the radio wave resonance part at a distance from the antenna ground part, a shielding conductor (36) of the feeder being connected to the antenna ground part on the opposite side of the antenna ground part from the radio wave resonance part, a signal conductor (34) of the feeder being connected to the radio wave resonance part.

Regarding claim 10, Usui et al. teaches in figures 1-3 and 8-9 a wireless communication apparatus (80) which performs wireless communication, the apparatus comprising: a radio wave resonance part (18) through which a radio wave is transmitted or received; an antenna ground part (16) electrically connected to the radio wave resonance part; and a connection part (17) which fixes the antenna ground part at such

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a position that the antenna ground part is closer to the radio wave resonance part than other non-antenna ground parts (86, 81) of the wireless communication apparatus.

Regarding claim 11, Usui et al. teaches in figures 1-3 and 8-9 the wireless communication apparatus according to Claim 10, comprising: first and second radio wave resonance parts (18, 28) corresponding to the radio wave resonance part; first and second antenna ground parts (16, 26) corresponding to the antenna ground part and respectively connected to the first and second radio wave resonance parts; and first and second connection parts (17, 27) corresponding to the connection part, the first and second connection pads fixing the first and second antenna ground parts at such positions that each antenna ground part is closer to the first or second radio wave resonance part than other non-antenna ground parts (86, 81) of the wireless communication apparatus, wherein each of the first and second radio wave resonance part than other non-antenna ground parts (86, 81) is used in common in a first frequency band and in a second frequency band for transmission or reception; and the gain of the second radio wave resonance part in the first frequency band is lower than that of the first radio wave resonance part, and the gain of the second radio wave resonance part in the second frequency band is higher than that of the first radio wave resonance part.

Regarding claim 12, Usui et al. teaches in figures 1-9 a wireless communication apparatus (80) which performs wireless communication, the apparatus comprising: a radio wave resonance part (18) through which a radio wave is transmitted or received; an antenna ground part (16) connected to ground; a connection part (17) which fixes the

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antenna ground part at such a position that the antenna ground part is closer to the radio wave resonance part than other non-antenna ground parts (86, 81) of the wireless communication apparatus; and a feeder (33) laid to the radio wave resonance part at a distance from the antenna ground part, a shielding conductor (36) of the feeder being connected to the antenna ground part on the opposite side of the antenna ground part from the radio wave resonance part, a signal conductor (34) of the feeder being connected to the radio wave resonance part.

***Allowable Subject Matter***

5. Claims 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed May 11, 2005 have been fully considered but they are not persuasive. Because Applicant amended the claims 1, 9-10 and 12 "the antenna ground part is closer to the radio wave resonance part than other non-antenna ground parts of the wireless communication apparatus". Usui et al. teaches in figure 8 non-antenna ground parts (86, 81).

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shih-Chao Chen  
Primary Examiner  
Art Unit 2821

*Shih-Chao Chen*  
**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**

SXC  
June 27, 2005